Varia.
Vol. 1.
#12

An

Inaugural Essay

On

SUSPENDED ANIMATION

For the

Degree of

M. D.

Passed March 28th 1826

BY

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of

Pennsylvania

1826

Introduction.

In the first dawn of physiological learning, it might perhaps have appeared vain and presumptuous, to attempt restoring to animation, an apparently dead body.

But as we now know, that the characteristick signs of life and death are often obscure (if we except putrefaction) and that no one has been able certainly to pronounce, this is vitality, or that is death, as we are also certain, that the more obvious appearances of life may be suspended, without its being annihilated; it becomes an act of criminality to neglect any effort to resuscitate, in cases of the sudden suspension of vital action.

"Shall we refuse to rake the warm ashes for a spark, which may rekindle to a genial blaze, and give new vigor to a sinking frame?"

That life can exist as it were in a latent state, for sometime and still remain capable of being roused into action; and to produce all its phenomena, is established by facts so numerous and incontestible,

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as to render the attempt to prove it superfluous.

It must however, be acknowledged, that all efforts at resuscitation are often ineffectual, even in cases where submersion has not long existed. It becomes then a question of much interest and importance to be answered, wether in these instances, the failure is ~~not~~ to be attributed to a defect in the method now employed for recovery, or a total extinction of life.

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Suspended Animation from Drowning

I shall commence with ascertaining the proximate cause of the disease, produced by drowning; examining the state of the vital organs, so that we may form indications of cure. In the act of drowning the circulation becomes gradually more feeble and slow, and much anxiety is felt about the præcordia; to relieve which the person attempts to rise to the surface of the water; he then discharges a portion of water, when he again sinks. after struggling in this manner for a short time, convulsive spasms arise; the organs of respiration cease to act, and he at last expires: soon after which the skin becomes of a purple or blue cast, particularly about the face and neck, and the body sinks.

From considering that a drowned person is surrounded by water instead of air, and that in this situation he makes strong and repeated efforts to breathe; we should expect that the water would enter, and completely fill the lungs.

This opinion indeed was once very general, and still continues to prevail among the common people. but dissections have proven to the contrary; for after drowning

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dogs and cats with coloured fluids, little was found in their lungs upon examination; this circumstance may readily be accounted for, by recollecting that the muscles which form the opening into the trachea are exquisitely sensible, and contract violently upon the least irritation, as we frequently experience, when any part of the food or drink happens to come in contact with them. but after animation has been gone for some time. they relax and the lungs become filled.

If the thorax be immediately opened, the heart will be found contracting weakly; especially the ventricle and auricle of the right side, which are distended with black blood; while the left contains but a small portion, which through the thin sides of the auricle appears also black.

The cava, and all the deep seated veins are also distended with black blood.

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If it should be judged [illegible] [illegible] [illegible] [illegible] it should [illegible] used then an emetic [illegible] [illegible] [illegible] [illegible] [illegible] may be caused [illegible] [illegible] [illegible] [illegible] [illegible].

The [illegible] indication [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] from the head and face. This may be done by [illegible] the head in [illegible] [illegible] [illegible] [illegible] with salt and vinegar [illegible] [illegible], or, as [illegible] more cold; this [illegible] [illegible] [illegible] [illegible] [illegible] and [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]-ted.

The next indication is to stimulate the [illegible] [illegible] [illegible] [illegible] [illegible] means of Electricity and galvanic currents, which may be passed in different directions through the body, particularly [illegible] [illegible]. I think it a better plan to have the body [illegible] insulated, and electrified smartly; but this is not always convenient for the want of apparatus)

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three days, is by no means uncommon in those who are recovered from this, and from the other states of suspended animation; here a moderate bleeding from the neck, either with the lancet, or by cupping, may prove serviceable. These means should be persisted in for two or three hours at least; but their continuance for a greater length of time would be proper; as it is impossible to determine accurately, the moment when life has entirely ceased, so as to be no longer recalled.

While therefore the most distant hope remains, that life can be restored, it is an act meriting the severest censure, it is a measure almost amounting to a crime, to desist from exertion.

I cannot terminate this essay, without acknowledging the many obligations, under which I labour to the Professors of the University, for the instruction I have derived from their truly valuable lectures, and for their willingness to impart information.

That they may long continue the ornaments of the

chairs, which they now fill, with annually increasing fame to themselves, and advantage to their pupils, is my fervent wish.